

L Number	Hits	Search Text	DB	Time stamp
1	560	(sodium or Na) near2 (gallium or gallate)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/08/21 10:14
2	32	((sodium or Na) near2 (gallium or gallate)) same (electrolyte or additive)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/08/21 11:13
3	8	4150197.URPN.	USPAT	2003/08/21 10:28
4	5	NaGaO".sub.2"	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/08/21 11:14
5	31	sodium near2 gallium near2 oxide	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/08/21 11:27
6	18581	CARREIRO-LOUIS-G CARREIRO-L-G CARREIRO-ET-AL TUCKER-S TUCKER-STEVEN-P TUCKER-STEVEN-PAUL TUCKER-STEVE	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/08/21 11:33
7	28	(CARREIRO-LOUIS-G CARREIRO-L-G CARREIRO-ET-AL TUCKER-S TUCKER-STEVEN-P TUCKER-STEVEN-PAUL TUCKER-STEVE) and (fuel adj cell)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/08/21 11:32
8	3451	CARREIRO-LOUIS-G.in. CARREIRO-L-G CARREIRO-ET-AL.in. TUCKER-S.in. TUCKER-STEVEN-P.in. TUCKER-STEVEN-PAUL.in. TUCKER-STEVE.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/08/21 11:36
9	17	(CARREIRO-LOUIS-G.in. CARREIRO-L-G CARREIRO-ET-AL.in. TUCKER-S.in. TUCKER-STEVEN-P.in. TUCKER-STEVEN-PAUL.in. TUCKER-STEVE.in.) and (fuel adj cell)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/08/21 11:34
10	2	CARREIRO-LOUIS-G.in. CARREIRO-L-G CARREIRO-ET-AL.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/08/21 11:46
11	2	"6228527"	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/08/21 11:55
12	3	"6030517"	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/08/21 11:59
13	8	"3887399"	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/08/21 12:17
14	4	"3347155"	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/08/21 13:16
15	3947	aluminum and (fuel adj cell)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/08/21 13:17
16	420	(aluminum and (fuel adj cell)) and (alkaline same electrolyte)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/08/21 13:18

17	156	((aluminum and (fuel adj cell)) and (alkaline same electrolyte)) and additive	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/08/21 15:22
18	828	429/27.ccls. 429/29.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/08/21 15:23
19	29	(429/27.ccls. 429/29.ccls.) and (gallium gallate)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/08/21 15:31
20	16744	(aluminum or AL) same peroxide	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/08/21 15:32
21	120	((aluminum or AL) same peroxide) and (fuel adj cell)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/08/21 15:51
22	148	429/15.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/08/21 15:51

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10	2	CARREIRO-LOUIS-G.in. CARREIRO-L-G CARREIRO-ET-AL.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/08/21 11:36

Day :  
Thursday  
Date:  
8/21/2003

## PALM INTRANET

Time:  
11:38:20

### Inventor Name Search Result

Your Search was:

Last Name = CARREIRO

First Name = [Nothing Entered]

Application#	Patent#	Status	Date Filed	Title	Inventor Name
<a href="#">60301642</a>	Not Issued	020	08/06/2001	ORIGINAL BELT LEASH	CARREIRO, JOSEPH RAYMONDS
<a href="#">10260357</a>	Not Issued	041	09/30/2002	FOOTBALL BOARD GAME	CARREIRO, AURELIO B.
<a href="#">10006734</a>	Not Issued	030	11/30/2001	SODIUM GALLIUM OXIDE ELECTROLYTE ADDITIVE FOR ALUMINUM ANODE ACTIVATION	CARREIRO, LOUIS G.
<a href="#">09832114</a>	<a href="#">6498767</a>	150	04/11/2001	CRUISE MISSILE DEPLOYED SONAR BUOY	CARREIRO, PAUL J.
<a href="#">09822309</a>	<a href="#">6484641</a>	150	03/30/2001	CRUISE MISSILE DOWNED AIRMAN DECOY	CARREIRO, PAUL J.
<a href="#">09656196</a>	<a href="#">6401645</a>	150	09/06/2000	VEHICLE LAUNCH ASSEMBLY FOR UNDERWATER PLATFORMS	CARREIRO, JOSEPH A.
<a href="#">08679167</a>	<a href="#">5878278</a>	150	07/12/1996	SYSTEM FOR CONTROLLING CONNECTION REQUESTS BY EACH IO CONTROLLERS STORING AND MANAGING A REQUEST QUEUE WHEREIN ADDITIONAL CHANNEL ADDRESSES CAN BE ADDED	CARREIRO, PAUL PEIXOTO
<a href="#">08593647</a>	<a href="#">5728982</a>	150	01/29/1996	MINIATURE ROTARY ELECTRIC SWITCH	CARREIRO, ROBERT J.

<u>08581719</u>	<u>5630092</u>	150	01/02/1996	SYSTEM AND METHOD FOR TRANSFERRING COMPRESSED AND UNCOMPRESSED DATA BETWEEN STORAGE SYSTEMS	CARREIRO , PAUL P.
<u>08537349</u>	Not Issued	161	10/02/1995	SELF-CENTERING TIP AND EXTRUDING DIE	CARREIRO , LOUIS
<u>08326407</u>	Not Issued	166	10/20/1994	SYSTEM AND METHOD FOR TRANSFERRING COMPRESSED AND UNCOMPRESSED DATA BETWEEN STORAGE SYSTEMS	CARREIRO , PAUL P.
<u>08322441</u>	<u>5561824</u>	150	10/04/1994	STORAGE MANAGEMENT OF DATA FOR ENSURING COMMUNICATION OF MINIMAL LENGTH DATA	CARREIRO , PAUL P.
<u>08316994</u>	Not Issued	166	10/03/1994	METHOD AND APPARATUS FOR AUTOMATIC FRAME TRANSMISSION ON A CHANNEL TO CONTROLLER INTERFACE IN A DATA PROCESSING SYSTEM	CARREIRO , PAUL PEIXOTO
<u>07747970</u>	Not Issued	161	08/21/1991	SCENTED STUFFED ANIMAL	CARREIRO , JOSEPH E.
<u>07641075</u>	<u>D337139</u>	150	01/14/1991	EXERCISE BAR	CARREIRO , ROBERT T.
<u>07382826</u>	<u>4933003</u>	150	07/18/1989	METAL ALLOY FORMATION BY REDUCTION OF POLYHETEROMETALLIC COMPLEXES	CARREIRO , LOUIS G.
<u>07039483</u>	Not Issued	161	04/17/1987	CANDY	CARREIRO , ERNESTO
<u>07018915</u>	Not Issued	161	02/25/1987	HANDLEBARS PORTA-GYM	CARREIRO , ROBERT T.
<u>05968396</u>	<u>D257635</u>	150	12/11/1978	TOY SWORD	CARREIRO , RONALD
<u>05968395</u>	<u>D259578</u>	150	12/11/1978	TOY HELMET	CARREIRO , RONALD

## Inventor Search Completed: No Records to Display.

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**Search Another:  
Inventor**

**Last Name**

carreiro

**First Name**

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Print selected from Online session Page 1 08/21/2003

(FILE 'HOME' ENTERED AT 16:07:24 ON 21 AUG 2003)

FILE 'CAPLUS' ENTERED AT 16:07:48 ON 21 AUG 2003

L1 4732 S (ALUMINUM OR AL) (P) PEROXIDE#

L2 20 S L1 AND (FUEL (W) CELL#)

=> s l2 and (gallium# or gallate#)

256369 GALLIUM#

10499 GALLATE#

L3 1 L2 AND (GALLIUM# OR GALLATE#)

L3 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1997:239821 CAPLUS

DOCUMENT NUMBER: 127:20835

TITLE: Enhanced electrochemical performance in the development of the **aluminum/hydrogen peroxide semi-fuel cell**

AUTHOR(S): Dow, E. G.; Bessette, R. R.; Seebach, G. L.; Marsh-Orndorff, C.; Meunier, H.; VanZee, J.; Medeiros, M. G.

CORPORATE SOURCE: Naval Undersea Warfare Center, Division Newport, Newport, RI, 02841, USA

SOURCE: Journal of Power Sources (1997), 65(1-2), 207-212  
CODEN: JPSODZ; ISSN: 0378-7753

PUBLISHER: Elsevier

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Significant accomplishments from this research effort have defined and characterized the nature and rate of the chem. dynamics at the anode and cathode, thus allowing the development of the **aluminum/hydrogen peroxide** couple as an energy-dense semi-fuel cell system. This effort has included the investigation of new **aluminum** alloys, development of new electrocatalysts for the hydrogen **peroxide**, optimization of the operating parameters and modeling of the electrochem. performance of the couple. Furthermore, it has demonstrated a technique that will enhance the electrochem. properties of selected **aluminum** anodes, while controlling unwanted corrosion reactions at a tolerable level. The unique methodol. described in this paper involves the use of additives to activate the surface of the **aluminum** anode-electrolyte, thus avoiding alloying, processing and heat treating. In addn. to this anode development, we have identified a novel electrocatalyst that enhances effective and efficient electrochem. redn. of hydrogen **peroxide**, thus shifting the predilection of the **peroxide** from parasitic decompn. to desired high rate electrochem. redn. The improved performance of this electrochem. couple has led to the attainment of current densities of 500 to 800 mA cm<sup>-2</sup>, five to seven times that originally achievable at comparable cell voltages of 1.4 to 1.2. System-level modeling, based on the exptl. evidence reported in this paper, indicates that the **aluminum/hydrogen peroxide** couple is a versatile and energetic electrochem. energy source.

IT Anodic polarization  
Battery electrolytes

Fuel cells

Primary batteries

(enhanced electrochem. performance in the development of the **aluminum/hydrogen peroxide semi-fuel cell** for underwater vehicles)

IT Projectiles

(torpedoes; enhanced electrochem. performance in the development of the **aluminum/hydrogen peroxide semi-fuel**)



- cell)
- IT Vehicles  
(underwater: enhanced electrochem. performance in the development of the **aluminum/hydrogen peroxide semi-fuel cell**)
- IT 7429-90-5. Aluminum, uses  
RL: DEV (Device component use); USES (Uses)  
(anode: enhanced electrochem. performance in the development of the **aluminum/hydrogen peroxide semi-fuel cell** for underwater vehicles)
- IT 1304-76-3, Bismuth oxide, uses 1309-48-4, Magnesium oxide, uses  
1310-53-8, Germanium oxide, uses 1312-43-2, Indium oxide 1312-43-2,  
Indium oxide 1312-81-8, Lanthana 1314-36-9, Yttria, uses 1330-43-4,  
Sodium borate 6834-92-0 10141-05-6, Cobalt nitrate 12024-21-4,  
**Gallium** oxide 12058-66-1, Sodium stannate 12201-47-7, Sodium  
plumbate  $\text{Na}_2\text{PbO}_3$  13138-45-9, Nickel nitrate  
RL: DEV (Device component use); USES (Uses)  
(electrolyte additive; enhanced electrochem. performance in the development of the **aluminum/hydrogen peroxide semi-fuel cell** for underwater vehicles)
- IT 1314-13-2, Zinc oxide, uses 7722-84-1, Hydrogen **peroxide**, uses  
RL: DEV (Device component use); USES (Uses)  
(enhanced electrochem. performance in the development of the **aluminum/hydrogen peroxide semi-fuel cell** for underwater vehicles)